



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

AUG 1 2013

Ref: 8ENF-AT

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Corporation Company
Registered Agent for Noble Energy, Inc.
1675 Broadway, Suite 1200
Denver, Colorado 80202

Re: Request for information pursuant to section 114 of the Clean Air Act

Dear Sir/Madam:

Pursuant to section 114 (a)(1) of the Clean Air Act (the Act), 42 U.S.C. § 7414(a)(1), and under authority delegated to the undersigned, you are hereby requested to provide the U.S. Environmental Protection Agency (EPA) with information relating to Noble Energy, Inc (Noble) tank batteries located in Weld, Boulder and Broomfield Counties of Colorado. This information is needed to determine whether Noble is in compliance with provisions of the Act at these tank battery locations, including, but not limited to, air emissions of volatile organic compound (VOC) pollutants.

Please carefully review and follow the enclosures, as applicable: Instructions (Enclosure 1), Definitions (Enclosure 2), Claiming Confidentiality (Enclosure 3), Tank Battery Location Names (Enclosure 4), Questions (Enclosure 5), Statement of Certification (Enclosure 6), the EPA Microsoft Excel workbook for Noble responses (Enclosure 7).

The requested information shall be submitted in three stages which are identified in Enclosure 4. The first response group shall be submitted **no later than sixty (60) calendar days** after Noble's receipt of this letter as determined by the date on the Certified Mail Return Receipt. The second response group shall be submitted **no later than ninety (90) calendar days** after Noble's receipt of this letter and the third response group submitted **no later than one hundred and twenty (120) days** after Noble's receipt of this letter. This information must be submitted to:

Cindy Beeler, 8ENF-AT (beeler.cindy@epa.gov)
U.S. Environmental Protection Agency
1595 Wynkoop Street
Denver, Colorado 80202-1129
(303) 312-6204

For convenience, the EPA is supplying a spreadsheet populated with the questions for your use in submitting your response. If Noble has no responsive information or documents pertaining to a particular question, submit an affirmative statement and explanation. If a document is responsive to more than one question, this must be so indicated and only one copy of the document needs to be provided.

Except for the information specifically requested to be in an Excel spreadsheet format, Noble may choose to either submit documents in .pdf format or submit documents as hard copy documents. Electronic submissions are preferred to save paper and expenses.

Failure to provide the information required by this letter is a violation of the Act and may result in one or more of the following actions: (1) issuance of an administrative penalty order pursuant to section 113(d) of the Act, 42 U.S.C. § 7413(d); (2) issuance of an order requiring compliance with this request; (3) commencement of a civil action in accordance with sections 113(b) and 305 of the Act, 42 U.S.C. §§ 7413(b) and 7605; and/or any other action authorized under the Act.

You May Claim Confidentiality

Under section 114(c) of the Act, 42 U.S.C. § 7414(c), and pursuant to regulations at 40 C.F.R. Part 2, including 40 C.F.R. § 2.301, you are entitled to claim as confidential any information you provide to the EPA which involves trade secrets and is regarded as confidential business information by you. For such information, you may request that the EPA treat such information as confidential. Any such claim for confidentiality must conform to the requirements of 40 C.F.R. § 2.203(b). Note that emissions information cannot be claimed as confidential under section 114(c). For detailed instructions, please see Enclosure 3 to this letter. Information you supply will be treated as confidential business information to the degree determined to be appropriate according to the regulations. Please note that any CBI claim does not obviate the need to send that portion of the response to the EPA.

You Must Certify To Each Response

You are required to attach a properly executed Statement of Certification to your response to this request. The statement must be signed and dated. This statement certifies that the response submitted to the EPA is complete and contains all documents and information responsive to this request that is known to you, following a complete and thorough review of all information and sources available to you. Failure to properly certify, or submission of a fraudulent certification, may result in criminal proceedings against you. The certification requires attestation by an officer or appropriate official with Noble to the following statement:

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my personal inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to section 113(c)(2) of the Act, and 18 U.S.C. §§ 1001, 1341 and 1505.

For detailed instructions regarding the Statement of Certification, please see Enclosure 6 to this letter.

Please be advised that the EPA may use any information submitted in response to this request in an administrative, civil or criminal action.

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative or civil action or investigation.

The EPA and CDPHE are working cooperatively on various oil and gas matters. The EPA will be sharing Noble's responses and the EPA's analysis with CDPHE, and will coordinate with CDPHE on any further action if necessary.

If you have any questions, the most knowledgeable people on my staff regarding this matter are Cindy Beeler at (303) 312-6204, for technical questions, and Dana Stotsky at (303) 312-6905, for legal questions.

Sincerely,

for Eddie A. Sierra
Andrew M. Gaydosh
Assistant Regional Administrator
Office of Enforcement, Compliance, and
Environmental Justice

Enclosures: 1 – Instructions
2 – Definitions
3 – Claiming Confidentiality
4 – Tank Battery Location Names
5 – Questions
6 – Statement of Certification
7 – Compact disk containing the EPA workbook (Noble114_032513.xlsx)

cc: Karin McGowan, Interim Executive Director, CDPHE
Martha Rudolph, Environmental Programs Director, CDPHE
Will Allison, Director, Air Pollution Control Division, CDPHE
Shannon McMillan, Field Services Program Manager, APCD-CDPHE
Curtis Rueter, Noble Energy, Inc.

INFORMATION REQUEST**INSTRUCTIONS**

We have provided the questions listed in Enclosure 5 within a Microsoft Excel workbook format (Noble114_032513.xlsx) on a compact disk with this letter as Enclosure 7. Please populate the workbook with your responses in the units noted. Each of the following instructions apply to each and every question contained in Enclosure 5.

1. Please adhere to the format contained in the workbook (worksheet: ResponseToQuestions). If your response requires a scanned or hardcopy document, you must identify the filename or document title. Make sure to correlate any hardcopy or scanned documents to a specific tank battery location name as listed in Enclosure 4.
2. For each question, identify each person whom you relied on or consulted with in preparing your responses to each question of this information request. Please use the enclosed workbook (worksheet: PersonsConsulted) to identify the person(s). Provide their name, title, job duties and duration of employment with Noble. If they are not an employee of Noble, provide their name, title, job duties and duration of employment with their employer.
3. For those questions where indicated, identify each document consulted, examined, or referred to in the preparation of your response or that contains information responsive to the question, and provide a true and correct copy of each such document if not provided in response to another specific question. Indicate on each document produced in response to this information request the number of the question to which it corresponds. Please use the enclosed workbook (worksheet: DocumentsConsulted) to identify such.
4. If requested information or documents are not known or are not available to you at the time of your response to this information request, but later become known or available to you, you must supplement your response to the EPA within 30 days of discovery. Moreover, should you find at any time after submission of your response that any portion is or becomes false, incomplete or misrepresents the facts, you must provide the EPA with a corrected response as soon as possible.

INFORMATION REQUEST**DEFINITIONS**

The following definitions apply to each of the questions set forth hereafter and are incorporated therein.

1. The term “**condensate storage tank**” shall mean the atmospheric storage tank(s) located at the tank battery locations listed in Enclosure 4 that store hydrocarbon liquids.
2. The term “**control device**” or its plural shall mean the air pollution control equipment used to achieve VOC emission reductions, for example, enclosed flare, combustor, combustion device, vapor recovery unit, etc.
3. The terms “**document**” and “**writing**” and the plural forms thereof shall mean all written, recorded or graphic matters, however produced or reproduced, of every kind and description, pertaining in any way to the subject matter of this action. The terms “document” and “writing” shall include, but are not limited to: any receipts; invoices; shipping records; purchase orders; purchase records; books; pamphlets; periodicals; memoranda (including those of telephone or oral conversations); contracts; correspondence; agreements; applications; financial records; security instruments; disbursements; checks; bank statements; time records; accounting or financial records; notes; diaries; logs; facsimiles (faxes); telegrams or cables prepared, drafted, received or sent; electronic mail (e-mails), whether drafted, received or sent; tapes; transcripts; recordings; minutes and notes of meetings; directives; work papers; charts; drawings; prints; flow sheets; photographs; infrared camera recordings; film; computer printouts; x-ray photographs; advertisements; catalogs; data; sampling reports, plans, protocols, reports, analyses; or any handwritten, recorded, transcribed punched, taped, filmed or graphic matter, however produced or reproduced in Noble’s possession, custody or control or to which Noble has or has had access.
4. The term “**flash emissions**” shall mean entrained natural gas vapors or other emissions that are released from hydrocarbon liquids when exposed to temperature increases or pressure drops, for example such as when condensate is transferred from production vessels to other vessels or to atmospheric storage tanks.
5. The term “**person**” or its plural or any synonym thereof, is intended to and shall embrace and include any individual, partnership, corporation, company, association, government agency (whether federal, state, local or any agency of the government of a foreign country) or any other entity.
6. The term “**response group #**” as used in Enclosure 4, refers to groups of tank battery locations. Those identified as Response Group #1 are required **no later than sixty (60) calendar days after** days after Noble’s receipt of this letter as determined by the date on the Certified Mail Return Receipt. Those identified as Response Group #2 are required **no later than ninety (90) calendar days after** days after receipt Noble’s of this letter as determined by the date on the Certified Mail Return Receipt. Those identified as Response Group #3 are required **no later than one hundred twenty (120) calendar days after** days after Noble’s receipt of this letter as determined by the date on the Certified Mail Return Receipt.

7. The term **“tank battery location name”** shall mean the property, operations or facilities presently owned or operated by Noble Energy, Inc. (Noble) and located in the Denver-Julesburg Basin north of Denver, Colorado in the 8-hour Ozone Nonattainment Area. Tank battery location names listed in Enclosure 4 correspond to those used by Noble when reporting under Colorado’s Regulation 7 system-wide requirements (Reg. 7, XII.F.4), submitted via spreadsheet to the Colorado Air Pollution Division.
8. The term **“tank vapor capture system”** or its plural shall include all vent lines, connections, fittings, valves, relief valves, thief hatches or any other appurtenance employed to contain and collect condensate storage tank vapors and transport or convey them to the emission control device. **“Tank vapor capture system #”** as created by the EPA and used in Enclosure 4, identifies condensate tank vapor capture systems which are manifolded together between one or more tank battery location(s) routed to a common control device or devices. For example, Stroh H 12-18, Stroh H 12-22 and Stroh H 12-21 tank batteries appear to have a common vapor capture system that routes tank emissions to a single control device.
9. The term **“working, breathing, standing (w/b/s) emissions”** shall mean those emissions that can occur as vapors are displaced from the condensate storage tank headspace when the tank is filled (working) or when there are temperature or pressure fluctuations in the condensate storage tank that volatilize lighter ends (breathing/standing).
10. The terms **“you”** and/or **“your”** shall mean Noble, and all its agents, servants, employees, representatives, investigators, accountants, auditors, attorneys, experts, consultants, contractors, and others who are in possession, custody, or control (actual or constructive), or that is otherwise available to you, of relevant information, or may have obtained information for or on behalf of Noble.

INFORMATION REQUEST**CLAIMING CONFIDENTIALITY**

You may assert a business confidentiality claim covering all or part of the information you provide in response to this information request for any business information entitled to confidential treatment under section 114(c) of the Clean Air Act (CAA), 42 U.S.C. § 7414, and 40 C.F.R. Part 2, subpart B. Under section 114(c) of the CAA, you are entitled to confidential treatment of information that would divulge methods or processes entitled to protection as trade secrets. Under 40 C.F.R. Part 2, subpart B, business confidentiality means “the concept of trade secrecy and other related legal concepts which give (or may give) a business the right to preserve the confidentiality of business information and to limit its use or disclosure by others in order that the business may obtain or retain business advantages it derives from its rights in the information.” See 40 C.F.R. § 2.201(e).

Information covered by a claim of business confidentiality will be disclosed by the Environmental Protection Agency (EPA) only to the extent, and by means of the procedures, set forth in section 114(c) of the Act and 40 C.F.R. Part 2, subpart B. The EPA will construe your failure to furnish a business confidentiality claim with your response to this information request as a waiver of that claim, and the information may be made available to the public without further notice to you.

To assert a business confidentiality claim, you must place on (or attach to) all information you desire to assert as business confidential either a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as “trade secret,” “proprietary,” or “company confidential” at the time you submit your response to this information request. Allegedly confidential portions of otherwise non-confidential documents should be clearly identified, and may be submitted separately to facilitate identification and handling by the EPA. You should indicate if you desire confidential treatment only until a certain date or until the occurrence of a certain event.

The criteria the EPA will use in determining whether material you claim as business confidential is entitled to confidential treatment are set forth at 40 C.F.R. §§ 2.208 and 2.301. These regulations provide, among other things, that you must satisfactorily show that: (1) the information is within the scope of business confidentiality as defined at 40 C.F.R. § 2.201(e); (2) that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; (3) the information is not and has not been reasonably obtainable by legitimate means without your consent; and (4) the disclosure of the information is likely to cause substantial harm to your business’s competitive position. See 40 C.F.R. § 2.208 (a)-(d). Emission data, as defined at 40 C.F.R. § 2.301(a)(2), is expressly not entitled to confidential treatment under 40 C.F.R. Part 2, subpart B. See 42 U.S.C. § 7414(c); 40 C.F.R. § 2.301(e).

If you assert a claim of business confidentiality in connection with information and documents forwarded in response to this request for information, in accordance with 40 C.F.R. § 2.204(e)(4), the EPA is requesting that you answer the following questions with respect to any information or document for which you assert a claim of business confidentiality:

1. What specific portions of the information are alleged to be entitled to confidential treatment? Specify by page, paragraph and sentence when identifying the information subject to your claim.

2. For what period of time do you request that the information be maintained as confidential, e.g., until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, specify that event. Additionally, explain why the information should be protected for the time period you've specified.
3. What measures have you taken to protect the information claimed as confidential from undesired disclosure? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?
4. Is the information contained in any publicly available material such as the internet, publicly available databases, promotional publications, annual reports or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?
5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.
6. For each category of information claimed as confidential, explain with specificity whether disclosure of the information is likely to result in substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?
7. Is there any other explanation you deem relevant to the EPA's determination of your business confidentiality claim that is not covered in the preceding questions? If so, you may provide such additional explanation.

You must furnish answers or comments to the above questions concurrent with your response to this information request if you have claimed any information as business confidential. See 40 C.F.R. § 2.204(e)(2). Pursuant to 40 C.F.R. § 2.205(b)(2), you may request an extension of this deadline. The EPA will construe your failure to furnish timely answers or comments as a waiver of your confidentiality claim, consistent with 40 C.F.R. § 2.204(e)(1). Please submit your comments to:

Dana Stotsky
U.S. EPA Region 8
1595 Wynkoop Street (ENF-L)
Denver, CO 80202-1129
(303) 312-6905

Pursuant to 40 C.F.R. § 2.205(c), you are hereby advised that information you submit as part of your answers or comments may be regarded by the EPA as entitled to confidential treatment if, when it is received by the EPA, it is marked in accordance with 40 C.F.R. § 2.203(b). As required by 40 C.F.R. § 2.204(e)(6), you may assert a business confidentiality claim covering all or part of your response to these questions, as provided in 40 C.F.R. § 2.203(b). Information covered by such a claim will be disclosed by the EPA only to the extent, and by means of the procedures, set forth in section 114(c) of the Act and 40 C.F.R. Part 2. The EPA will construe the failure to furnish a confidentiality claim with

your comments as a waiver of that claim, and the information may be made available to the public without further notice to you.

INFORMATION REQUEST**TANK BATTERY LOCATION NAMES**

Questions in Enclosure 5 pertain to the tank battery locations listed below.

Response Group #	EPA-Assigned Tank Vapor Capture System #	Tank Battery Location Name	APCD ID (AIRS AFS #)
1	1	Stroh H 12-18	1238248
	1	Stroh H 12-22	1238249
	1	Stroh H 12-21	1239022
1	2	Stroh H 12 1, 2, 7, 8	1233705
	2	Stroh H 12-27	1237200
	2	Stroh D7-31	1237426
1	3	Turk Blue D 19-4, 5, 6, 2J	1233590
	3	Butterball D 19-20D	1233590
1	4	Elton Red V 12-1, 8	1231763
1	5	Thomason X 16-11, 12, 13	1231745
1	6	Bierig 1-26B	1236901
	6	Rhoadarmer 1-26B	1236698
1	7	UPRC 23-TH6, UPV 23-8H6	1233489
	7	UPV 23-1H6, 2H6	1233745
1	8	Ikenouye 29-10, F 29-23	1232813
	8	Ikenouye F 28-33	1237247
	8	Ikenouye F 29-22	1237252
1	9	Gemini K1-99 HZ	1238539
	9	Gemini K1-15, 16	1233663
1	10	Alles F 33-22	1237117
	10	Alles 33-7H5	1232826
	10	Alles 3	1232221
1	11	Alles F 33-18	1238373
	11	Alles F 33-27	1238419
1	12	Alexander F 33-24	1232751
	12	Alexander F 33-21	1237111
	12	Alexander F 34-33	1237116
	12	Alexander F 33-1, 33-2	1237115
1	13	Alles F 33-29	1238371

	13	Alles F 33-28	1238310
1	14	Lundvall J 18-18	1238224
	14	Lundvall J 18-2	1238308
	14	Lundvall J 17-30	1238222
	14	Lundvall J 17-31	1238332
	14	Lundvall J 17-32	1238223
	14	Lundvall J 18-1, 8	1238306
1	15	Lundvall J 18-22	1238250
	15	Lundvall J 18-21	1238225
	15	Lundvall J 18-17	1238307
	15	Lundvall J 18-27	1238226
	15	Lundvall J 18-28	1238227
1	16	Steve J 18-23	1236095
	16	Steve J 18-15 & 16	1236102
	16	Steve J 18-9 & 10	1236104
1	17	Duke J 4-11, 14, 25	1236490
	17	Duke J 4-12, 13	1236505
	17	Duke J 4-33	1236502
	17	Duke USX J 5-9, 16	1236493
1	18	Austyn J 9-3, 6	1235674
	18	Austyn J 9-5, 19	1235675
1	19	Turk White D 19-1, 2, 8	1233639
2	20	Haller X 21-7J1, Haller 41-21, Arends X 21-2	1235466
2	21	Aguilar 29-11H5, 12H5	1232790
2	22	Soco 29-1	1233720
	22	Soco 29-2, 29-7	1232156
2	23	Franklin 28-1, 28-15, F 28-23	1233676
2	24	McElroy 41-5	1234920
2	25	Schank J 35-27	1237171
2	26	Brozovich MA 8-10, 15, 16J	0141324
2	27	Simpson MD 2-1, 2, 7, 8J	0131275
2	28	Bierig 1-26, 8-26	1231915
	28	Rhoadarmer 1-26, 2-26	1232497
2	29	Meyer 1, J 26-16	1232773
2	30	Mantel J 23-10, 23-15	1233662
	30	Wiedeman J 23-11, 14	1233483
2	31	Schank 1, J 35-2	1232710
2	32	Lundvall 13-14, 15	1233046
2	33	Lundvall 1 & J 18-6 & 18-12	1234627
2	34	Flatirons 1-36, I 36-4	1232146
2	35	LDS D-17-13	1238965
	35	LDS D 20-29D	1238945

2	36	LDS(Thompson) D 20-31D	1238942
	36	LDS D 20-30D	1238941
	36	Butterball D 19-27D	1238940
2	37	MICK D 18-11,12,13,14,25	1232085
2	38	Dechant X08-15, 24	1239503
3	39	Meguire 21-3P, X 21-4	1237547
3	40	Green MA 17-9, 15, 16J	0141322
3	41	Green MA 17-1, 2, 8J	0141323
3	42	Beyer MA 10-5	0141325
3	43	Young 5-23, MC23-14D	0131317
	43	Young MC 23-11D, 12D	0131421
3	44	Morris MC 27-2, 7 & 8	0131295
3	45	Mary Miller 1, 2, 3, 4-35	0131296
3	46	Donley 1-36, MC 36-7	0131267
3	47	Reynolds 1	1238925
	47	Reynolds 2, 28-3	1232743
3	48	Erbes 5-2H5	1234877
3	49	Horton D 18-20D, 22P	1239605
	49	Scooter 18-10, 15, 16, 4J	1233589
	49	Scooter D 18-8, 9, Ji	
3	50	Arapahoe 1-36, MC 36-3, 5, 6	0131297
3	51	Ikenouye 1	1235797
3	52	Gemini G6-33	1238500
	52	Gemini K1-9, 10	1231725
3	53	Schank J 35-20	1237063
	53	Schank J 35-21	1237064
	53	Schank 2, J 35-6	1233679
3	54	Evans Industrial Park 1, 2	1234620
3	55	Weiderspon J 16-12, 13	1231873

INFORMATION REQUEST**QUESTIONS**

- 1) The Environmental Protection Agency (EPA) assigned tank vapor capture system #s to the list of tank battery locations in Enclosure 4, to recognize and identify tank battery locations whose condensate tank vapors are manifolded together between one or more tank battery location(s) and routed to a common control device. Please state whether the tank battery location names associated with the tank vapor capture system #s identified by the EPA in Enclosure 4 are correct. If they are incorrect, please provide correct identification and explain.
- 2) Separately, for each tank vapor capture system listed in Enclosure 4 (or if corrected in response to Question 1), affirmatively state whether Noble conducted, prior to construction of the tank vapor capture system and control device, a design analysis of the tank vapor capture system and control device. If your response is yes, please provide the date of that analysis and state whether the design analysis was performed to ensure that the tank vapor capture system and control device were adequately designed and sized to handle reasonably foreseeable fluctuations in emissions and minimize emissions to the atmosphere to the maximum extent practicable, and if not why not. If a pre-construction design analysis has been conducted, please supply all documents supporting the design analysis of each tank vapor capture system and control device. If Noble did not conduct a pre-construction design analysis for any tank vapor capture system listed in Enclosure 4, please answer the question accordingly.
- 3) If Noble did not conduct a design analysis of the tank vapor capture system and control device prior to construction as addressed in Question 2, affirmatively state whether Noble has ever conducted such an analysis. If your response is yes, please provide the date of that analysis and state whether the design analysis was performed to ensure that the tank vapor capture system and control device were adequately designed and sized to handle reasonably foreseeable fluctuations in emissions and minimize emissions to the atmosphere to the maximum extent practicable, and if not why not. If a design analysis has been conducted, please supply all documents supporting the design analysis of each tank vapor capture system and control device, including the date of the analysis. If Noble did not conduct a design analysis for any tank vapor capture system listed in Enclosure 4, please answer the question accordingly.
- 4) For those tank capture systems listed in Enclosure 4 (or if corrected in response to Question 1), for which Noble has never conducted a design analysis of the tank vapor capture system and control device, then for each tank vapor capture system, please conduct a design analysis of the existing tank vapor capture system(s) and control device(s). Quantify the peak total emission flow (cubic feet per second) due to flash emissions attributed with liquid dump events from the pressurized vessel upstream of the condensate storage tanks, along with w/b/s emissions. Your design analysis shall establish the flow capacity in cubic feet per second of the existing tank vapor capture system(s) and control device(s). You must supply input parameters, calculations and all supporting documentation.
- 5) Separately, for each tank vapor capture system listed in Enclosure 4 (or if corrected in response to Question 1), provide responses to the information requested below. For ease of organization, we

have provided a workbook in Enclosure 7 for this data to be entered with column headings corresponding to the questions below. Please use this workbook (worksheet: ResponseToQuestions) to provide the following information:

- a. Piping & instrumentation diagram of the process (wellhead(s) to control device). If more than one condensate storage tank is present within a tank vapor capture system, describe how condensate flows between condensate storage tanks.
- b. Identify the gas gathering pipeline into which the tank battery location enters and the maximum allowable operating pressure (psig) of that pipeline.
- c. Provide a list of the wells which flow to the initial separator(s) and a narrative description of how the production from those wells is set to flow to the initial separator(s) (e.g. based on time, pressure, other parameter(s), or a combination of these). State whether more than one well can flow to an initial separator concurrent with another well or wells.
- d. Provide a description, name and tag # ID of the initial separator(s) (e.g. single stage, dual stage, dual coil, HLP, VGR, etc.). For each stage of the initial separator(s) provide the following:
 - i. The maximum operating pressure (psig) and temperature (°F)
 - ii. If more than one stage in the initial separator(s), describe where flash emissions from subsequent stages of initial separator(s) are routed
 - iii. An indication of whether the final separator stage features a device on the liquid outlet line to prevent a vortex from forming during a liquid dump event which could lead to unintentional gas carry through.
- e. Describe whether there is an intermediate separation vessel(s) between the initial separator and the condensate storage tank. If so, provide:
 - i. The maximum operating pressure (psig) and temperature (°F).
 - ii. Describe where flash emissions from the intermediate separation vessel(s) are routed.
- f. Provide the condensate outlet pipe interior diameter (inches) from the separation vessel immediately upstream of the condensate storage tank (if the interior pipe diameter is not available, measure the separator outlet exterior pipe diameter, and so note).
- g. Provide the condensate outlet pipe orifice plate diameter (inches) from the separation vessel immediately upstream of the condensate storage tank.
- h. Describe whether the produced condensate is trucked or piped offsite from the condensate storage tank. If neither, provide an explanation.
- i. Describe whether the flow of condensate from the separation vessel immediately upstream of the condensate storage tank is continuous or is in intermittent batches.
- j. If the flow of condensate from the separation vessel immediately upstream of the condensate storage tank is in intermittent batches, provide:
 - i. A narrative description of what triggers a condensate liquid dumping event.
 - ii. The maximum condensate volume (barrels) of the separation vessel immediately upstream of the condensate storage tank.

- iii. An estimate of the instantaneous flow rate during a dumping event. This may be estimated using one of the following methods:
 1. Instantaneous flow rate = average daily production (barrels) / (dumping frequency (dumping events per day) x duration of a dumping event (hours)). The average daily production is provided in the EPA workbook (worksheet: ResponseToQuestions) [*the average daily production is calculated from Noble's reported Oil Production data to COGIS for 2008-2011*]; or
 2. Instantaneous flow can be calculated based on the flow coefficient of the dump valve ($\text{gpm/psi}^{0.5}$) and the pressure differential across the valve (psi) and the specific gravity of the hydrocarbon liquid (available in the extended hydrocarbon pressurized liquid analysis asked for in Question 6).
- k. For each tank vapor capture system, provide the number of associated condensate storage tank(s) and their volume (barrels). For this question, associated condensate storage tank means a tank whose vapors are captured and conveyed to a tank vapor capture system.
- l. Describe the condensate tank vapor capture system which routes tank vapors to the on-site control device by providing the following:
 - i. Pressure relief settings (psi) on the thief hatch and pressure relief valve on the condensate storage tank(s) or tank vapor capture system. Note any changes in pressure relief settings that may have occurred and date when changed.
 - ii. Thief hatch gasket/seal information, including the type of gasket/seal used (e.g. rubber, Viton).
 - iii. Pipe length (feet) from the condensate storage tank(s) to the control device (if the vapor capture system collects vapor from multiple tanks, use the average pipe length for all the condensate storage tanks to the control device).
 - iv. Inner pipe diameter (inches) of the tank vapor capture system from the condensate storage tank(s) to the control device.
 - v. Number of short radius elbows (short radius elbows have a radius equal to the pipe diameter).
 - vi. Number of long radius elbows (long radius elbows have a radius 1.5 times the pipe diameter).
 - vii. Number and type of valves (e.g. gate, check, globe, etc.).
 - viii. If the control device is an enclosed flare/combustor, provide the rated pressure loss across the combustor burner assembly as provided by the manufacturer of the combustion device (psi).
 - ix. Describe any low points in the tank vapor collection system piping where liquids could accumulate. Describe the frequency of draining these liquids. Describe the indicator, if any, that notifies the operator that liquids must be drained.
 - x. Set-point pressure (ounces per square inch) and maximum flow capacity (scf/hr) at that set-point of any backpressure valves installed on the vapor collection system.
 - xi. Provide a narrative description of the operations and maintenance program Noble employs to ensure emissions are minimized from the condensate tank(s) and tank vapor capture system(s) including thief hatch(es) and pressure relief valve(s), and the frequency of such.

- m. Identify the type of control device used (e.g. combustion device, VRU, etc.). If a combustor (i.e. enclosed flare) is used, provide the following:
 - i. The combustor manufacturer specifications showing the maximum flow rate of tank vapors under which a control efficiency of at least 95% for volatile organic compounds can be achieved (scf/hr).
 - ii. The combustor manufacturer recommended maintenance and service requirements.
 - iii. Provide a narrative description of the servicing Noble performs on the combustor(s) and the frequency of such.
- 6) Provide the following analytical results for each tank battery location listed in Enclosure 4. Submit via pdf file, noting the filename in the workbook (worksheet: ResponseToQuestions):
 - a. An extended hydrocarbon liquid analysis of a pressurized oil sample from the pressurized vessel immediately upstream of the condensate storage tank(s). Follow the sampling protocol found in Appendix C of the API E&P TANK Version 2.0 User's Manual. If such samples and analyses have been done within the past 12 months, you may provide this data. Include a copy of the lab analysis report showing:
 - i. Date and time of sample collection.
 - ii. Name of tank battery location.
 - iii. Description of where, within the tank battery location process, the sample was collected.
 - iv. Operating temperature (°F) and pressure (psi) of the vessel at the time the sample was collected.
 - v. The pressure (psi) of the sample at the time it was received by the laboratory.

At least 15 days prior to sampling, please provide a sampling protocol and schedule of sampling locations to Scott Patefield at EPA Region 8, at patefield.scott@epa.gov.

- b. API Gravity and Reid Vapor Pressure (RVP) (psia) of the "sales oil" in the condensate storage tank(s).

Noble Energy, Inc.

INFORMATION REQUEST

STATEMENT OF CERTIFICATION

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my personal inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to section 113(c)(2) of the Act and 18 U.S.C. §§ 1001, 1341 and 1505.

(Signature)

(Printed Name)

(Title)

(Date)

Enclosure 7

Noble Energy, Inc.

INFORMATION REQUEST

Compact disk containing the EPA Microsoft Excel workbook (Noble114_032513.xlsx)